MACHINE TRANSLATION

D2

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 08-140003
(43)Date of publication of application : 31.05.1996

---

(51)Int.Cl. H04N 5/44
H04N 5/45

---

(21)Application number :	06-277301	(71)Applicant :	SONY CORP
(22)Date of filing :	11.11.1994	(72)Inventor :	OKURA YUKIKO OKUMURA KAZUMASA YAMAZAKI AKIRA SHUDO TOMOKO

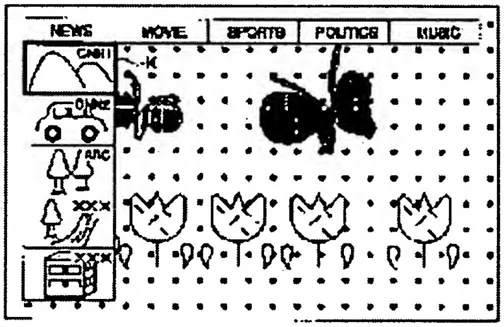
---

(54) PICTURE RECEPTION CONTROLLER AND PICTURE RECEPTION CONTROL METHOD

(57)Abstract:

PURPOSE: To quickly and easily select the program of a desired broadcast channel from many broadcasting channels.

CONSTITUTION: Along the upper side of a display screen, the five categories of NEWS, MOVIE, SPORTS, POLITICS and MUSIC are displayed. Also, along the left side of the display screen, the slave screens of the programs of the broadcasting channels most frequently received in the past four weeks belonging to the category displayed on a very left side are successively displayed from a top to a bottom in the descending order of frequency. The desired category is selected by performing an operation for moving a cursor K in a horizontal direction and the desired slave screen is selected by performing the operation for moving the cursor K in a vertical direction. When the desired slave screen is selected, the pictures of the broadcasting channel specified by the slave screen are displayed as a master screen.



LEGAL STATUS

[Date of request for examination]	12.11.2001
[Date of sending the examiner's decision of rejection]	
[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]	
[Date of final disposal for application]	
[Patent number]	3508784
[Date of registration]	09.01.2004

BEST AVAILABLE COPY

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

* NOTICES *

JPO and NCIPI are not responsible for any damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1] A storage means to remember the receiving hysteresis of said broadcast channel received by said receiving means within the predetermined period to be a receiving means to receive a predetermined broadcast channel including the category to which said broadcast channel corresponds at least, A reception-control means to make said receiving means receive said broadcast channel which belongs to said category memorized by said receiving hysteresis when ordered in the predetermined mode, Image reception-control equipment characterized by having the display-control means on which the screen of said broadcast channel belonging to said category is displayed as a child screen in accordance with the shaft of another side while displaying said category along with one side of the horizontal axis and vertical axes of the display screen.
[Claim 2] Said display-control means is image reception-control equipment according to claim 1 characterized by displaying said child screen along with either the left part of said display screen, or the right-hand side while displaying said category along either the surface of said display screen, or the lower side.
[Claim 3] Said display-control means is image reception-control equipment according to claim 2 characterized by displaying further the cursor for making the predetermined thing of said category or said child screen choose.
[Claim 4] Image reception-control equipment according to claim 3 characterized by having further the migration actuation means operated when moving said cursor.
[Claim 5] It is image reception-control equipment according to claim 4 characterized by said display-control means carrying out horizontal migration of the display of said category instead of moving said cursor horizontally when said migration actuation means is operated so that said cursor may be moved horizontally.
[Claim 6] Image reception-control equipment according to claim 4 or 5 characterized by having further the selection actuation means operated when choosing said child screen specified with said cursor.
[Claim 7] Said migration actuation means and a selection actuation means are image reception-control equipment according to claim 6 characterized by being constituted so that it can be continuously operated with one finger.
[Claim 8] When the receiving hysteresis of the broadcast channel received within the predetermined period is memorized including the category to which said broadcast channel corresponds at least and it is ordered in the predetermined mode, While receiving said broadcast channel belonging to

said category memorized by said receiving hysteresis and displaying said category along with one side of the horizontal axis and vertical axes of the display screen The image reception-control approach characterized by displaying the screen of said broadcast channel belonging to said category as a child screen in accordance with the shaft of another side.

[Translation done.]

* NOTICES *

JPO and NCIPI are not responsible for any
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention is used when receiving the broadcast channel of a large number broadcast through a broadcasting satellite, and it relates to suitable image reception-control equipment and the image reception-control approach.
[0002]
[Description of the Prior Art] In recent years, in cable television (CATV:Cable Television), digital satellite broadcasting (DSS:Digital Satellite System (trademark of Hughes Communications)), etc., many channelization of broadcast is advancing with progress of the high-efficiency-coding technique represented by MPEG (Moving Picture Experts Group). With these many channelization, the number of channels also becomes 150 thru/or 175 pieces, and becomes complicated [the actuation which chooses a predetermined program out of 150 thru/or 175 channels].
[0003] As shown in drawing 25 , the display screen of a television receiver is divided into two or more child screens, and making it display the image of the program currently broadcast by each child screen by each channel is proposed there. Since the program of many channels is introduced into one screen, a viewer can grasp the contents of the program at the time of a desired channel comparatively easily.
[0004] A user does in this way, looks at the image of each channel divided and displayed on the child screen, and inputs the number of the channel which wishes to choose. Thereby, the inputted channel of a number is received.
[0005] However, in such conventional equipment, in order to have to input the number of the channel to choose, the technical problem that operability was bad occurred.
[0006] Then, memorizing the past receiving hysteresis and receiving the broadcast channel received by most many frequency in corresponding time of day is also proposed.
[0007]
[Problem(s) to be Solved by the Invention] However, in this way, though the broadcast channel was received corresponding to receiving hysteresis, broadcast channels other than the broadcast channel received by most many frequency in corresponding time of day may be received, and, in such a case, the technical problem that operability was bad too occurred.
[0008] This invention is made in view of such a situation, improves operability, and enables it to

choose a desired broadcast channel more quickly.

[0009]

[Means for Solving the Problem] A receiving means by which the image reception-control equipment of this invention receives a predetermined broadcast channel (for example, tuners 21A and 21B of drawing 3), A storage means to memorize the receiving hysteresis of the broadcast channel received by the receiving means within the predetermined period including the category to which a broadcast channel corresponds at least (for example, EEPROM38 of drawing 3), When ordered in the predetermined mode (for example, the Favor RITTO guide mode), A reception-control means to make a receiving means receive the broadcast channel belonging to the category memorized by receiving hysteresis (for example, step S25 on the program of drawing 14), While displaying a category along with one side of the horizontal axis and vertical axes of a display screen, it is characterized by having the display-control means (for example, MPEG video decoder 25B of drawing 3) on which the screen of the broadcast channel belonging to a category is displayed as a child screen in accordance with the shaft of another side.

[0010] While displaying a category along either the surface of the display screen (for example, display screen of drawing 16), or the lower side, a child screen can be displayed on a display-control means along with either the left part of the display screen, or the right-hand side.

[0011] The cursor (for example, cursor K of drawing 16) for making the predetermined thing of a category or a child screen choose can be further displayed on a display-control means.

[0012] In this case, the migration actuation means (for example, handler 52 in the case of being operated in the direction of four directions of drawing 4) operated when moving cursor can be established further. When a migration actuation means is operated so that cursor may be moved horizontally, a display-control means can carry out horizontal migration of the display of a category instead of moving cursor horizontally.

[0013] Moreover, the selection actuation means (for example, handler 52 operated when drawing 4 carries out ENTA actuation) operated when choosing the child screen specified with cursor can be established further.

[0014] A migration actuation means and a selection actuation means can be constituted so that it can be continuously operated with one finger.

[0015] When the receiving hysteresis of the broadcast channel which received the image reception-control approach of this invention within the predetermined period is memorized including the category to which a broadcast channel corresponds at least and it is ordered it in the predetermined mode (for example, the Favor RITTO guide mode), While receiving the broadcast channel belonging to the category memorized by receiving hysteresis and displaying a category along with one side of the horizontal axis and vertical axes of a display screen, it is characterized by displaying the screen of the broadcast channel belonging to a category as a child screen in accordance with the shaft of another side.

[0016]

[Function] In the image reception-control equipment and the image reception-control approach of the above-mentioned configuration, while a category is displayed on one side of the horizontal axis and vertical axes of the display screen, the screen of the broadcast channel currently then broadcast is displayed as a child screen in accordance with the shaft of another side. Therefore, it becomes possible quickly and simply to choose a desired broadcast channel.

[0017]

[Example] Drawing 1 shows the example of AV (Audio Video) structure of a system which applied the image reception-control equipment of this invention. In the case of this example, the AV system 1 is constituted by VCR (Video Cassette Recorder)6 of a VHS method besides IRD (Integrated Receiver/Decoder)2 which restores to the signal received through the broadcasting satellite which is not illustrated with a parabolic antenna 3, VCR7 of 8mm method, the multiple disk player (MDP:Muti-Disc Player) 8, mini disc (MD:Mini Disc) equipment 9, and the monitoring device 4.

[0018] VCR6, VCR7, MDP8, and MD equipment 9 are connected with the monitoring device 4 by AV Rhine 11, respectively. Moreover, IRD2 is connected to VCR6 by AV Rhine 11. Furthermore, each of these equipments are connected one by one to series by the control line 12.

[0019] To IRD2, it is made as [input / with an infrared (IR:Infrared) signal / by the remote commander 5 / a command]. That is, if the predetermined thing of the button switch 50 of a remote commander 5 is operated, it is made as [carry out / outgoing radiation of the infrared signal corresponding to it is carried out from IR dispatch section 51, and / signal / to the IR receive section 39 of IRD2 / incidence].

[0020] In addition, the front panel 40 which has various kinds of actuation button switches is established in this IRD2, and it is made as [carry out / the direct input of the same command as the command emitted by operating a remote commander 5].

[0021] Drawing 2 expresses the electrical installation condition of the AV system 1 of drawing 1 . A parabolic antenna 3 has LNB(Low Noise Block downconverter)3a, changes the signal from a broadcasting satellite into the signal of a predetermined frequency, and supplies it to IRD2. IRD2 supplies the output to VCR6 through AV Rhine 11 constituted by three lines. The output of VCR6 is supplied to the monitoring device 4 by AV Rhine 11 constituted by three lines. Moreover, VCR7, MDP8, and MD equipment 9 are connected by 6, 3, or four AV(s) Rhine 11 to the monitoring device 4, respectively.

[0022] Furthermore, IRD2, VCR6, VCR7, MDP8, MD equipment 9, and a monitoring device 4 have the AV equipment control signal transceiver sections 2A, 6A, 7A, 8A, 9A, and 4A, respectively. Sequential connection of these is made by the control line 12 which consists of a wye yard SIRCS (Wired Sony Infrared Remote Control System) at series.

[0023] Drawing 3 shows the example of a configuration inside IRD2. The RF signal outputted from LNB3a of a parabolic antenna 3 is supplied to tuner 21of front end 20A A, and gets over. The output of tuner 21A is supplied to QPSK demodulator circuit 22A, and a QPSK recovery is carried out. Error correction circuit 23A is supplied, an error is detected and corrected, and the output of QPSK demodulator circuit 22A is amended if needed.

[0024] Moreover, also in tuner 21B, QPSK demodulator circuit 22B, and front end 20B constituted by error correction circuit 23B, it is made like front end 20A as [perform / the independently same processing as front end 20A].

[0025] The key required to decode a code is stored in CAM (Conditional Access Module)33 constituted with the IC card which consists of CPU, ROM, RAM, etc. with the decode program. Since the signal transmitted through a broadcasting satellite is enciphered, a key and decode processing are needed for decoding this code. Then, this key is read from CAM33 through the card reader interface 32, and a demultiplexer 24 is supplied. A demultiplexer 24 decodes the enciphered signal using this key.

[0026] In addition, accounting information besides a key required for decryption and a decode program etc. is stored in this CAM33.

[0027] A demultiplexer 24 receives the input of the signal which the error correction circuit 23 (23A, 23B) of a front end 20 (20A, 20B) outputs, supplies the decoded video signal to the decoding section 44, and supplies the decoded audio signal to the MPEG audio decoder 26.

[0028] The decoding section 44 is also constituted by the decoding sections 44A and 44B which can operate independently, and has MPEG video decoder 25A, DRAM25aA, or MPEG video decoder 25B and DRAM25aB, respectively. [as well as a front end 20]

[0029] The MPEG video decoders 25A and 25B make DRAM25aA and 25aB memorize the inputted digital video signal suitably, and perform decoding of the video signal compressed by the MPEG method. The decoded video signal is supplied to the NTSC encoder 27 through the picture in picture (P in P) processor 45, and is changed into the luminance signal (Y) of NTSC system, a chroma signal (C), and a composite signal (V). A luminance signal and a chroma signal are outputted as an S video signal through the buffer amplifier 28Y and 28C, respectively. Moreover, a composite signal is outputted through buffer amplifier 28V.

[0030] The MPEG audio decoder 26 makes DRAM26a memorize suitably the digital audio signal supplied from the demultiplexer 24, and performs decoding of the audio signal compressed by the MPEG method. In D/A converter 30, D/A conversion of the decoded audio signal is carried out, the audio signal of a left channel is outputted through buffer amplifier 31L, and the audio signal of a right channel is outputted through buffer amplifier 31R.

[0031] RF modulator 41 changes and outputs the composite signal which the NTSC encoder 27 outputs, and the audio signal which D/A converter 30 outputs to a RF signal. Moreover, the cable box for CATV which is not illustrated carries out through [of the RF signal of the NTSC system inputted from other AV equipments], and this RF modulator 41 outputs it to other AV equipments of VCR6 grade as it is.

[0032] In the case of this example, these video signals and audio signals will be supplied to VCR6 through AV Rhine 11.

[0033] CPU (Central Processor Unit)29 performs various kinds of processings according to the program memorized by ROM37. For example, Tuners 21A and 21B, the QPSK demodulator circuits 22A and 22B, the error correction circuits 23A and 23B, the picture in picture processor 45, etc. are controlled. Moreover, AV equipment control signal transceiver section 2A is controlled, and a predetermined control signal is outputted to other AV equipments through the control line 12, and the control signal from other AV equipments is received.

[0034] To this CPU29, the actuation button switch (not shown) of the front panel 40 can be operated, and the direct input of the predetermined command can be carried out. Moreover, if a remote commander 5 is operated, an infrared signal will be outputted from IR dispatch section 51, this infrared signal will be received by the IR receive section 39, and a light-receiving result will be supplied to CPU29. Therefore, a predetermined command can be inputted into CPU29 also by operating a remote commander 5.

[0035] Moreover, CPU29 incorporates the video signal which a demultiplexer 24 outputs and signals other than an audio signal, for example, EPG (Electrical Program Guide) information, (transmitted through a broadcasting satellite with an audio signal and a video signal), it is a predetermined format and SRAM (Static Random Access Memory)36 is made to supply and memorize it. EPG information includes the information (for example, a channel, a title, broadcast time of day, a category, etc.) about the program of the broadcast channel of a dozens of hours after [current time]. Since this EPG information is transmitted frequently, it can always hold the newest EPG to SRAM36.

[0036] Data which want to hold after power-source OFF, such as for example, the Favor RITTO guide list (with reference to drawing 12 , it mentions later), are suitably memorized by EEPROM (Electrically Erasable Programable Read Only Memory)38. Moreover, CPU29 compares the time information which the calender timer 35 outputs with the time stump which a demultiplexer 24 separates and outputs from an input signal, and controls the MPEG video decoders 25A and 25B and the MPEG audio decoder 26 possible [decoding] to right timing corresponding to the comparison result.

[0037] Furthermore, CPU29 controls the MPEG video decoders 25A and 25B to generate predetermined OSD (On-Screen Display) data. Corresponding to this control, the MPEG video decoders 25A and 25B generate predetermined OSD data, write them in DRAM25aA and 25aB, are read further and outputted. Thereby, a predetermined alphabetic character, a graphic form, etc. can be suitably outputted and displayed on a monitoring device 4.

[0038] A modem 34 delivers under control of CPU29 and receives data among other equipments through the telephone line.

[0039] Drawing 4 shows the more detailed example of a configuration of the button switch 50 of a remote commander 5. As shown in this drawing, a remote commander 5 equips the lower part with the handler 52 while equipping the upper part with IR dispatch section 51. This handler 52 is made as [operate / in any one direction / it / among a total of eight directions of the direction of four directions of slant besides the direction of four directions]. Moreover, this handler 52 is pressed in the direction perpendicular to space, and is made as [make / it / to function as an ENTA (ENTER) button switch]. That is, this handler 52 chooses a direction with one finger, and is made as [perform / further / one finger / an ENTA input], without lifting a finger as it is.

[0040] The menu button switch 53 is arranged at the lower right direction of this handler 52. This menu button switch 53 is operated when displaying a menu screen on a monitoring device 4. The escape (ESC) button switch 54 operated on the left-hand side of the menu button switch 53 when returning processing is formed.

[0041] Hereafter, although explanation is omitted, in addition to this, various kinds of actuation button switches are formed as a button switch 50.

[0042] Drawing 5 thru/or drawing 9 express the example of a configuration for detecting actuation of a handler 52. The small stick controller shown in this drawing 5 is the interior of a remote commander 5, and is arranged under the handler 52. That is, the stick 61 is combined with the handler 52 currently formed with the resin which has flexibility in one. Therefore, corresponding to the actuation direction, actuation of a handler 52 makes the stick 61 as [move / perpendicularly], as it moves in any one direction of [of the eight directions shown by the arrow head a] in drawing 5 or an arrow head b shows.

[0043] Under the stick 61, the pin 105 is implanted perpendicularly, and the edge of this pin 105 is inserted in the hole 104 currently formed in the guide plate 103 of the outside object 101, and is made as [guide]. It is combined with the guide plate 103 which points to Y shaft orientations in one by the outside [this] object 101, and the side plate 102 which points to X shaft orientations is formed in it. And the shaft 62 elongated to X shaft orientations is implanted in this side plate 102.

[0044] On the other hand, the stick 61 is inserted in hole 114A formed in the bottom plate 114 of a corpus 111 so that a corpus 111 may be arranged inside the outside object 101. This hole 114A is a hole long to Y shaft orientations, as shown in drawing 9 . And a side plate 112 is formed, and compared with the side plate 112, the joint plate 113 with low height is formed in Y shaft orientations at the bottom plate 114 of this corpus 111 so that it may counter mutually, so that X shaft orientations may be countered. And the shaft 63 elongated to Y shaft orientations is implanted in this joint plate 113. The hole 104 currently formed in the guide plate 103 of the outside object 101 is formed on the radii centering on this shaft 63.

[0045] The small stick controller as shown in drawing 6 thru/or drawing 9 is arranged inside the box 116, as shown in drawing 5 , and shafts 62 and 63 are made as [extend / from the holes 118 and 119 formed in the box 116, respectively / outside]. A hole 119 is almost equal to the path of a shaft 63, or the hole 118 is a long hole from it to considering as the large path a little at Z shaft orientations. And a variable resistor 64 is arranged and the switch 66 of a push button mold is arranged under the other-end section on the outside of this box 116 so that it may combine with one edge of a shaft 62. Moreover, a variable resistor 65 is arranged and it is combined with the shaft 63 by the outside of Y shaft orientations of a box 116.

[0046] If the X-axis is rotated for a stick 61 as a core, the outside object 101 combined with the guide plate 103 through the pin 105 will rotate a shaft 62 (X-axis) as a core. Since long hole 114A is formed in Y shaft orientations at the bottom plate 114 of a corpus 111 at this time, the corpus 111 is in the condition [having stood it still].

[0047] On the other hand, if a Y-axis is rotated for a stick 61 as a core, since hole 114A currently formed in the bottom plate 114 is formed in the path almost same to X shaft orientations as a stick 61, a corpus 111 will rotate a shaft 63 (Y-axis) as a core with rotation of a stick 61. At this time, a pin 105 is guided with the hole 104 currently formed on the radii centering on a shaft 63. Moreover, since the side plate 112 of a corpus 111 has distance sufficient between the side plates 102 of the outside object 101 at this time, a side plate 102 is not contacted. Therefore, the outside object 101 is in the condition [having stood it still].

[0048] If a stick 61 is operated in the direction of [between the X-axis and a Y-axis], while a corpus 111 will rotate a Y-axis as a core, the outside object 101 rotates the X-axis as a core.

[0049] Since the zero return spring 106 is combined with the lower limit of a stick 61, if the rotation actuation to a stick 61 is stopped, according to the energization force of this zero return spring 106, a stick 61 will return to a zero (vertical position).

[0050] If the X-axis is rotated for a stick 61 as a core, in order that a shaft 62 may rotate the X-axis as a core, the resistance of a variable resistor 64 changes. Therefore, the amount of rotation and the rotation direction of a stick 61 centering on the X-axis are detectable from the resistance of this variable resistor 64.

[0051] Moreover, if a Y-axis is rotated for a stick 61 as a core, in order that a shaft 63 may rotate a Y-axis as a core, the resistance of a variable resistor 65 changes. Therefore, the amount of rotation and the rotation direction of a stick 61 centering on a Y-axis are detectable from the resistance of this variable resistor 65.

[0052] Thus, in drawing 5 , the actuation (actuation to a horizontal direction) to any one direction of [of the eight directions shown by the arrow head a] is detected.

[0053] If a stick 61 is perpendicularly pressed downward along with an arrow head b in drawing 5 , since the stick 61 is inserted in hole 114A of a bottom plate 114, a corpus 111 does not carry out especially change, but since the pin 105 which implanted the outside object 101 in the stick 61 is inserted in the guide plate 103 through the hole 104, it will be pressed downward in one with a stick 61. The outside at this time, since the hole 118 of the box 116 in which the shaft 62 is inserted is used as the perpendicularly long hole, the migration to down [of the body 101] is guided with this hole 118. When a shaft 62 descends to a position, a part of shaft 62 presses a switch 66. Thereby, a switch 66 turns on or turns off and the press actuation to down [of a stick 61] is detected.

[0054] And a termination of the press actuation to the lower part to a stick 61 returns a stick 61 to an upper home position according to the energization force of the return spring which was built in the switch 66 and which is not illustrated.

[0055] Drawing 10 expresses the example of a configuration of the circuit inside a remote commander 5. The microcomputer (microcomputer) 71 has RAM74 which CPU72 and CPU72 which perform various kinds of processings according to the program memorized by ROM73 and ROM73 which memorize a program perform various kinds of processings upwards, and memorizes required data etc. suitably. The button switch matrix 82 is connected to this microcomputer 71, and it is made as [detect / it / whether which button switch of the button switch 50 shown in drawing 4 was operated].

[0056] A/D converter 77 carries out A/D conversion of the resistance (it corresponds to rotation centering on the X-axis of a stick 61) of a variable resistor 64, and is made as [output / to a microcomputer 71]. Moreover, A/D converter 78 carries out A/D conversion of the resistance (it corresponds to rotation centering on the Y-axis of a stick 61) of a variable resistor 65, and is made as [output / to a microcomputer 71]. Furthermore, ON of a switch 66 or the signal (it corresponds to the actuation to the perpendicular direction of a stick 61) of OFF is made as [supply / a microcomputer 71].

[0057] Moreover, through the LED driver 75, a microcomputer 71 drives LED76 of IR dispatch section 51, and is made as [generate / an infrared signal].

[0058] Next, actuation of the example of IRD2 shown in drawing 3 is explained. Now, IRD2 shall receive a predetermined broadcast channel, and it shall output to a monitoring device 4, and shall display.

[0059] A demultiplexer 24 is supplied, after a QPSK recovery is carried out by QPSK demodulator circuit 22A and error correction processing of the signal which tuner 21A for parent screens received is carried out by error correction circuit 23A at this time. A demultiplexer 24 separates a video signal and an audio signal from the inputted signal, supplies a video signal to MPEG video decoder 25of decoding section 44A for parent screens A, and supplies an audio signal to the MPEG audio decoder 26.

[0060] MPEG video decoder 25A decodes the video signal compressed by the MPEG method, and supplies it to the NTSC encoder 27 through the picture in picture processor 45. The NTSC encoder 27 changes the inputted signal into the video signal of NTSC system, and is made to output and display it on a monitoring device 4 through the buffer amplifier 28Y, 28C, and 28V.

[0061] On the other hand, the MPEG audio decoder 26 decodes the audio signal compressed by the inputted MPEG method, and outputs it to D/A converter 30. Sound emission of the audio signal by which D/A conversion was carried out with D/A converter 30 is outputted and carried out to a monitoring device 4 through the buffer amplifier 31L and 31R.

[0062] When such viewing-and-listening actuation is performed, CPU29 performs the Favor RITTO guide list creation processing as shown in the flow chart of drawing 11 . That is, the data of the channel which progressed to step S2 and was first received when it stood by until it received and a predetermined program was received, if it judged whether tuner 21A would have received the predetermined program in step S1 and had not received, its time of day, and the category of the program are incorporated. The data of a receiving channel and a category can be incorporated from EPG memorized by SRAM36, and time-of-day data can be incorporated from the calender timer 35.

[0063] Next, it progresses to step S3, the newest Favor RITTO guide list of [for past 4 week] is created, and EEPROM38 is made to memorize the Favor RITTO guide list.

[0064] This Favor RITTO guide list makes a category and time of day a parameter, and is a list showing of what kind of category the user was watching the program in each time of day. Drawing 12 expresses the example of this Favor RITTO guide list.

[0065] In drawing 12 , an axis of ordinate is made into time of day, and the axis of abscissa is used as the category shaft. The time of day of an axis of ordinate is classified per 30 minutes, and the category of an axis of abscissa is classified into the news (NEWS) expressed with the category number C1 thru/or C5, a movie (MOVIE), a sport (SPORTS), politics (POLITICS), and five musical (MUSIC) categories.

[0066] And in the time zone in every 30 minutes, the number of five received broadcast channels is registered into sequence with much the frequency. For example, in the case of the category of news, the 35th channel, the 36th channel, the 25th channel, the 6th channel, and the 113rd channel are registered for 30 minutes from 6:00 to 6:30. In this case, the 35th channel of frequency is the largest and frequency is the smallest in the 113rd channel being registered.

[0067] In addition, when time of delivery is too much short (for example, when having received for several seconds), it can avoid registering with receiving hysteresis in creating this Favor RITTO guide list. Although the channel of very short time amount many will be received when having changed the channel one by one in order to choose a predetermined broadcast channel, such a condition is not in the condition that the user has the intention of reception of the broadcast channel. Then, it is desirable to make it register for example, as that by which the broadcast channel was received when it was in a receive state more than for 5 minutes continuously.

[0068] If a user operates the menu button switch 53 of a remote commander 5, CPU29 will control MPEG video decoder 25A, and will display a menu as shown in a monitoring device 4 at drawing 13 .

[0069] In this menu screen, the actuation pallet which has nine carbon button icons shown by the number 1 thru/or the number 9 is displayed. That is, in this example, each carbon button icon of a number 1 thru/or a number 8 is considered as a news guide (NEWS GUIDE), the General guide (GENERAL GUIDE), a sport list (SPORTS LIST), a movie guide (MOVIE GUIDE), an exit (EXIT), browsing (BROWSING), the attraction (ATRACTION), and the Favor RITTO guide (FAVORITE GUIDE), respectively. And the carbon button icon MORE of a number 9 is made as [operate / when displaying the 2nd page of this menu].

[0070] A user can choose a predetermined thing out of this carbon button icon, and can perform a predetermined function.

[0071] Next, in the condition that the user displayed on the monitoring device 4 the menu shown in drawing 13 , the processing at the time of choosing the carbon button icon of the Favor RITTO

guide (FAVORITE GUIDE) shown by the number 8 is explained with reference to the flow chart of drawing 14 and drawing 15 .
[0072] When starting this processing, a user turns on the carbon button icon of the Favor RITTO guide in step S21 first. That is, the menu button switch 53 of a remote commander 5 is operated, and a menu as shown in a monitoring device 4 at drawing 13 is displayed. And in drawing 13 , the cursor expressed with a highlights condition is moved to a position by operating a handler 52 in the direction of four directions. The cursor shown in drawing 13 moves in the predetermined direction corresponding to the actuation direction.
[0073] And ENTA actuation is carried out after moving cursor (highlights) to the carbon button icon of the Favor RITTO guide which expresses with a number 8.
[0074] When the input of the signal corresponding to actuation of the carbon button icon of the Favor RITTO guide is received through the IR receive section 39, it progresses to step S22, CPU29 initializes 1 to Variable i, progresses to step S23 further, and initializes Ci to the variable C showing a category. Then, 1 is initialized to the variable N corresponding to the number of the child screens (received broadcast channel) progressed and displayed on step S24.
[0075] Furthermore it progresses to step S25, the Favor RITTO guide mode is set up, the Favor RITTO guide list (drawing 12) memorized by EEPROM38 is read, the Nth channel of the category Ci registered there is read, and the broadcast channel is made to receive.
[0076] That is, CPU29 controls tuner 21B to receive the Nth channel (in the case of now the 1st) of the category Ci (in the case of now C1) of the Favor RITTO guide list.
[0077] Thus, in now, as shown in drawing 12 , tuner 21B receives the 35th channel and outputs the input signal to QPSK demodulator circuit 22B. QPSK demodulator circuit 22B carries out the QPSK recovery of the inputted signal, and outputs it to error correction circuit 23B. Error correction circuit 23B performs the error correction of the inputted signal, and outputs it to a demultiplexer 24. A demultiplexer 24 separates a video signal from the inputted signal, and supplies this video signal to MPEG video decoder 25of decoding section 44B B. DRAM25aB is used for MPEG video decoder 25B, and it decodes the inputted video signal.
[0078] A decoding output is inputted into the picture in picture processor 45, and is memorized by the memory to build in. The picture in picture processor 45 performs processing which compresses the video signal inputted from decoding section 44B as a child screen. And this is read and it is made to output and display on a monitoring device 4.
[0079] Next, in step S26 thru/or S29, it judges whether the handler 52 was operated the right or leftward, whether it was operated by the bottom or above, whether the escape button switch 54 was operated, and whether ENTA actuation of the handler 52 was carried out.
[0080] When neither of these actuation is made, it progresses to step S30, and it judges whether Variable N is the last value (5 when it is this example). When Variable N has not reached the last value yet, it progresses to step S31, and only 1 increments Variable N (referred to as N= 2), and it returns to step S25. The Nth channel (in the case of now the 2nd) of Category Ci (in the case of now C1) is read, and the channel is made to receive in step S25.
[0081] That is, CPU29 controls tuner 21B and makes the 36th channel registered as a broadcast channel received by the 2nd frequency of the category C1 of the Favor RITTO guide list shown in drawing 12 receive. The picture in picture processor 45 generates the image of the received broadcast channel as a child screen, and is made to output and display it on a monitoring device 4.
[0082] The above step S25 thru/or processing of S31 are performed repeatedly, and the child screen of five broadcast channels of a category C1 is displayed on a monitoring device 4. In this case, in step S30, it judges that Variable N reached the last value, and progresses to step S32, and the decrement of the variable N is carried out only for 4. That is, Variable N is set as 1. Then, return and processing after it are repeated and performed to step S25.
[0083] Thus, the child screen of a monitoring device 4 is displayed as a false animation by performing step S25 thru/or processing of S32 repeatedly.

[0084] Drawing 16 expresses the example of a display of the monitoring device 4 which can be set in this case. In this example, the title of news (NEWS), a movie (MOVIE), a sport (SPORTS), politics (POLITICS), and five musical (MUSIC) categories is horizontally displayed along with the surface (or the lower side is sufficient) of the screen of a monitoring device 4. Moreover, five child screens of the program of the broadcast channel belonging to the category (in the case of drawing 16 news) currently displayed on the left end (or right end) are displayed along with the left part (or right-hand side) of the display screen. Moreover, at this time, MPEG video decoder 25B displays Cursor K on the location corresponding to the child screen of most a top, as shown in drawing 16 .

[0085] Next, in the condition that five child screens of a predetermined category are displayed, a user operates a handler 52 the right or leftward in this way to receive the broadcast channel of other categories. If a handler 52 is operated the right or leftward, this will be detected in step S26 and it will progress to step S33. In step S33, processing for which the category currently displayed is moved in the direction corresponding to the actuation direction is performed.

[0086] For example, in the condition which shows in drawing 16 , a category is moved leftward instead of moving Cursor K rightward, when a handler 52 is operated rightward (Cursor K is moved rightward relatively). Consequently, the display condition in a monitoring device 4 changes from the condition shown in drawing 16 to the condition which shows in drawing 17 .

[0087] that is, in the display screen of drawing 17 , the category of the movie currently displayed on the 2nd from the left end till then (setting to drawing 16) indicates by migration at a left end -- having -- the following, a sport, politics, and a sound -- a migration indication of each easy category is given on left-hand side one by one. And a migration indication of the category of the news currently displayed most on left-hand side till then (setting to drawing 16) is given most on right-hand side.

[0088] If a handler 52 is further operated rightward from the condition which shows in drawing 17 , the display condition of a monitoring device 4 will change from the condition shown in drawing 17 to the condition which shows in drawing 18 . That is, in the display screen of this drawing 18 , a migration indication of the category of the sport currently displayed on the 2nd from the left end in drawing 17 is given most at a left end, and a migration indication of each category of politics, music, and news is hereafter given on left-hand side one by one. And a migration indication of the category of the movie currently displayed most on left-hand side in drawing 17 is given most on right-hand side.

[0089] In the condition which shows in drawing 18 , in the condition which it changes to the condition which shows a display condition in drawing 17 when a handler 52 is operated on left-hand side, and shows in drawing 17 , when a handler 52 is operated on left-hand side, a display condition will change to the condition which shows in drawing 16 .

[0090] In addition, in the above example, although Cursor K is not moved horizontally and it was made to move a category in the corresponding direction (hard flow), it is also possible to move Cursor K in the actuation direction as it is.

[0091] For example, in the condition which shows in drawing 16 , it is also possible not to move the display of a category, when a handler 52 is operated rightward, and to move the cursor K itself rightward. However, as shown in drawing 19 in this case, a migration indication also of the child screen will be given with Cursor K, and a child screen will be displayed so much in the center of a screen. Consequently, the center section of the parent screen will be hidden by the child screen, and a parent screen becomes hard to see. Then, as shown in drawing 16 thru/or drawing 18 , it is desirable not to move Cursor K (child screen) horizontally and to make it move the display of a category horizontally relatively.

[0092] the step S34 after the category was moved in the direction (hard flow) corresponding to the actuation direction as mentioned above at step S33 -- progressing -- Variable i -- the actuation direction -- corresponding -- 1 -- an increment -- or a decrement is carried out. That is, when a handler 52 is operated rightward, the increment of the variable i is carried out only for 1, and when operated leftward, the decrement only of 1 is carried out. However, when Variable i increments only further 1 in the condition of being 5, Variable i is set as 1. Moreover, when Variable i carries out the decrement only of further 1 in the condition of being 1, Variable i is set as 5.

[0093] Next, return and processing after it are repeated and performed to step S25.

[0094] That is, in the condition which shows, for example in drawing 16 , actuation which moves Cursor K rightward is performed, and when the display of a category is moved leftward relatively, as shown in drawing 17 , five child screens corresponding to the category of the movie newly displayed most on left-hand side are displayed. In the case of this example, as shown in drawing 12 , the child screen of the 60th channel, the 93rd channel, the 103rd channel, the 3rd channel, and the 7th channel will be displayed.

[0095] Similarly, in the condition which shows in drawing 18 , the child screen of the 95th channel belonging to the category of a sport, the 2nd channel, the 133rd channel, the 134th channel, and the 59th channel (drawing 12) is displayed.

[0096] A desired category is chosen as mentioned above, and in the condition that five child screens belonging to the category are displayed, when choosing a desired child screen, a user operates a handler 52 to down or above. This actuation is detected in step S27. At this time, it progresses to step S35 and CPU29 moves Cursor K in the direction corresponding to actuation.

[0097] For example, in the condition which shows in drawing 16 , when a handler 52 is operated downward, Cursor K is moved downward by 1 child screen. Consequently, the display screen changes from the condition shown in drawing 16 to the condition which shows in drawing 20 .

[0098] Then, return and processing after it are repeated and performed to step S25.

[0099] Thus, in the condition which shows, for example in drawing 20 , when a handler 52 is operated further downward, as shown in drawing 21 , Cursor K is moved to a pan downward by 1 child screen.

[0100] Moreover, it will be in the condition which Cursor K is moved to a pan by 1 child screen when a handler 52 is further operated upward in the condition which it is moved upward by 1 child screen as Cursor K is shown in drawing 20 , when a handler 52 is operated upward in the condition which shows in drawing 21 conversely, and shows in drawing 20 , and shows in drawing 16 .

[0101] A user operates the escape button switch 54, when a child screen to choose especially does not exist, even if it sees a child screen. This actuation is detected in step S28. In step S28, if actuation of this escape button switch 54 is detected, it will progress to step S36 and the Favor RITTO guide processing will be terminated. That is, the display of a category and a child screen is stopped and it returns to the display condition of only a parent screen again.

[0102] On the other hand, a user operates a handler 52 perpendicularly in drawing 4 and performs ENTA actuation for Cursor K to set in the condition of having moved onto the desired child screen, and choose and display [Cursor] the child screen. In step S29, if this ENTA actuation is detected, it will progress to step S37, the channel number of the child screen in which Cursor K is then located will be acquired, and processing on which the image of that broadcast channel is displayed as a parent screen will be performed.

[0103] That is, CPU29 controls tuner 21A and makes the broadcast channel of the acquired number receive. And tuner 21B is controlled and reception of a child screen is terminated. Thereby, the screen chosen and specified with Cursor K is displayed on a monitoring device 4 as a parent screen.

[0104] For example, in the condition which shows in drawing 21 , when ENTA actuation is performed, the broadcast channel (ABC when it is this example) in which Cursor K is then located is received by tuner 21A, and as shown in drawing 22 , the image of this broadcast channel ABC is displayed as a parent screen.

[0105] Then, it progresses to step S36 and the Favor RITTO guide processing is ended.

[0106] Usually, in predetermined time of day (for example, 7:00 p.m.), he watches the program of a predetermined category (for example, news) in many cases. In such a case, if the child screen of the

received program is displayed for every category like the above-mentioned example, a desired program (news) can be chosen quickly.
[0107] Furthermore, since the program belonging to the category can be chosen after choosing a category first and reducing the number of programs, when choosing the program of a different category, compared with the case where a desired program is chosen, quicker selection is attained out of each child screen.
[0108] Drawing 23 expresses other examples of a configuration of a remote commander 5. In this example, it replaces with the handler 52 of the remote commander 5 shown in drawing 4 , and the direction button switch 160 is formed. This direction button switch 160 consists of the rise button switch 161, a down button switch 162, a left button switch 163, and a light button switch 164, and when inputting actuation of the direction of four directions, respectively, it is operated. Moreover, the ENTA (ENTER) button switch 165 is formed and it is made as [operate / when performing ENTA actuation].
[0109] Drawing 24 expresses the example of a configuration inside the remote commander 5 shown in drawing 23 . In the example of drawing 23 , since it is made as [perform / each of direction actuation and ENTA actuation / as a kind of actuation of a button switch 50], each of these actuation is made as [detect / by the button switch matrix 82]. Consequently, A/D converters 77 and 78 are considered as the omitted configuration at the variable resistors 64 and 65 in drawing 10 , the switch 66, and the list. Other configurations are the same as that of the case in drawing 10 .

[0110] In addition, although IRD2 was considered as the independent configuration, it can also be made to build in a monitoring device 4 and other AV equipments in the above example.
[0111]
[Effect of the Invention] Since it was made to display a category and a child screen on one side and another side of the horizontal axis and vertical axes of the display screen like the above according to the image reception-control equipment and the image reception-control approach of this invention, it becomes possible to carry out selection reception of the desired program quickly and simply out of many broadcast channels.

[Translation done.]

* NOTICES *

JPO and NCIPI are not responsible for any
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the perspective view showing the example of AV structure of a system which applied the image reception-control equipment of this invention.
[Drawing 2] It is the block diagram showing the electrical installation condition of AV system of drawing 1 .
[Drawing 3] It is the block diagram showing the example of a configuration inside [of drawing 1]

IRD2.
[Drawing 4] It is the top view showing the configuration of the top face of the remote commander 5 of drawing 1 .
[Drawing 5] It is the perspective view showing the example of a configuration of the small stick controller which detects actuation of the handler 52 of drawing 4 .
[Drawing 6] It is the perspective view showing the configuration inside the example of drawing 5 .
[Drawing 7] It is the front view showing the configuration of the example of drawing 6 .
[Drawing 8] It is the right side view showing the configuration of the example of drawing 6 .
[Drawing 9] It is the top view showing the configuration of the example of drawing 6 .
[Drawing 10] It is the block diagram showing the example of a configuration inside the remote commander 5 of drawing 4 .
[Drawing 11] It is a flow chart explaining the Favor RITTO guide list creation processing.
[Drawing 12] It is drawing showing the example of the Favor RITTO guide list based on processing of drawing 11 .
[Drawing 13] It is drawing showing the example of a display of a menu screen.
[Drawing 14] It is a flow chart explaining the Favor RITTO guide processing.
[Drawing 15] It is a flow chart following drawing 14 .
[Drawing 16] It is drawing showing the example of a display of the Favor RITTO guide screen.
[Drawing 17] It is drawing showing the example of a display of the Favor RITTO guide screen.
[Drawing 18] It is drawing showing the example of a display of the Favor RITTO guide screen.
[Drawing 19] It is drawing showing the example of a display of the Favor RITTO guide screen.
[Drawing 20] It is drawing showing the example of a display of the Favor RITTO guide screen.
[Drawing 21] It is drawing showing the example of a display of the Favor RITTO guide screen.
[Drawing 22] It is drawing showing the display screen at the time of carrying out ENTA actuation in the condition which shows in drawing 21 .
[Drawing 23] It is the top view showing other examples of a configuration of a remote commander 5.

[Drawing 24] It is the block diagram showing the example of a configuration inside the remote commander 5 of drawing 23 .
[Drawing 25] It is drawing showing the conventional example of a display which chooses a predetermined channel.
[Description of Notations]
1 AV System
2 IRD
3 Parabolic Antenna
4 Monitoring Device
5 Remote Commander
6 VCR(VHS)
7 VCR(8mm)
8 Multiple Disk Player
9 Mini Disc Equipment
21A, 21B Tuner
22A, 22B QPSK demodulator circuit
23A, 23B Error correction circuit
24 Demultiplexer
25A, 25B MPEG video decoder
26 MPEG Audio Decoder
27 NTSC Encoder
29 CPU
35 Calender Timer

36 SRAM
38 EEPROM
39 IR Receive Section
52 Handler
53 Menu Button Switch
54 Escape Button Switch

[Translation done.]

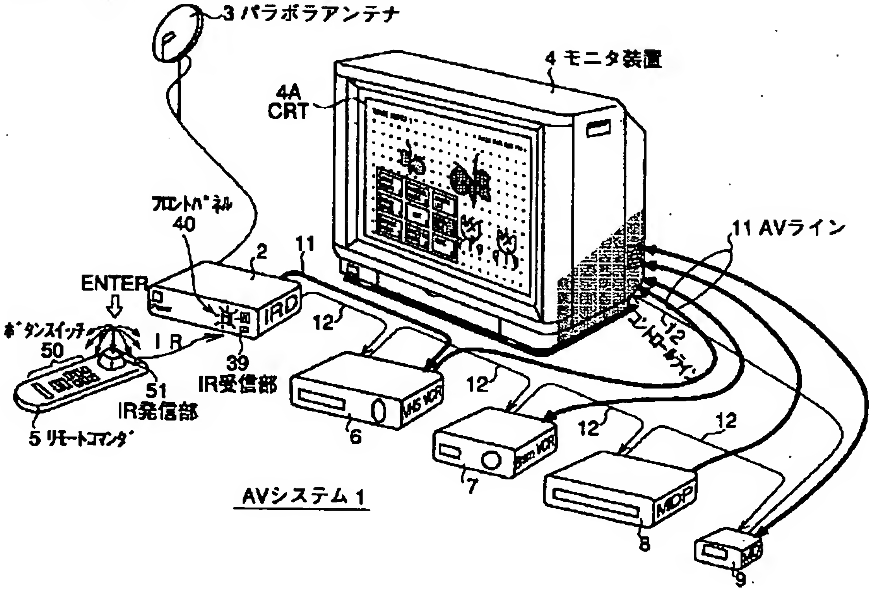
* NOTICES *

JPO and NCIPI are not responsible for any
damages caused by the use of this translation.

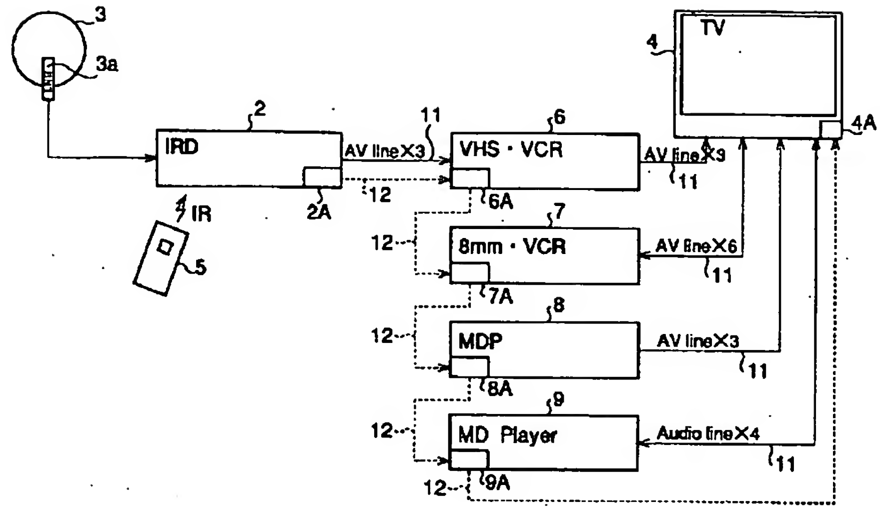
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

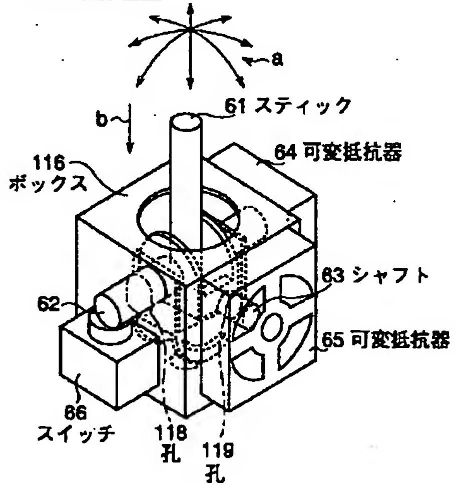
[Drawing 1]


3 パラボラアンテナ
4 モニタ装置
4A CRT
ﾌﾛﾝﾄﾊﾟﾈﾙ 40
2
11
11 AVライン
ENTER
ﾎﾞﾀﾝｽｲｯﾁ 50
I R
IRD
12
39 IR受信部
51 IR発信部
5 ﾘﾓｰﾄｺﾏﾝﾀﾞ
ｺﾝﾄﾛｰﾙﾗｲﾝ 12
VHS VCR
6
12
8mm VCR
7
12
12
MDP
8
MD
9
AVシステム 1

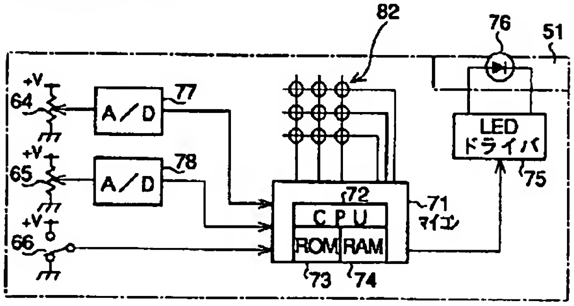
[Drawing 2]


3
3a
2
IRD
2A
IR
5
AV lineX3
11
12
6
VHS · VCR
6A
7
8mm · VCR
7A
8
MDP
8A
9
MD Player
9A
4
TV
4A
AV lineX3
AV lineX6
AV lineX3
Audio lineX4
11
12

[Drawing 5]

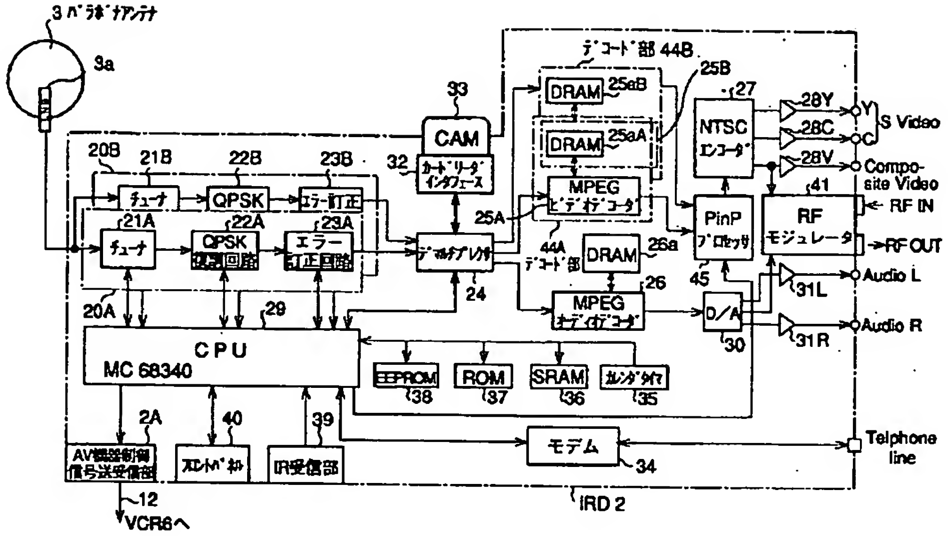

a
b
61 スティック
64 可変抵抗器
116 ボックス
63 シャフト
62
65 可変抵抗器
66 スイッチ
118 孔
119 孔

[Drawing 10]

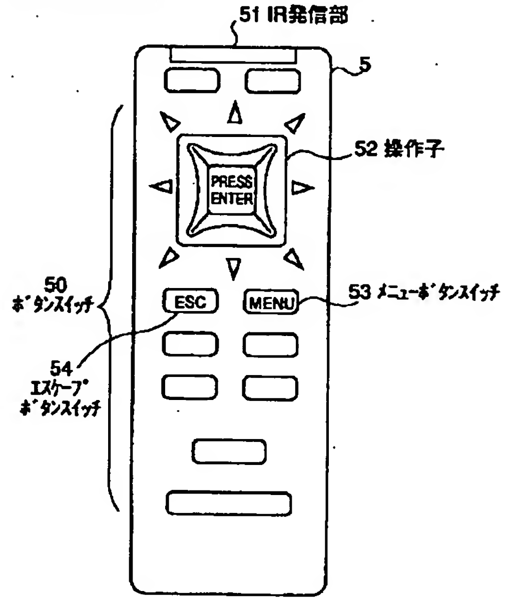

82
76
51
+V
64
A/D
77
+V
65
A/D
78
+V
66
72
CPU
ROM
RAM
73
74
71 マイコン
LED ドライバ
75

リモートコマンダ5

[Drawing 3]

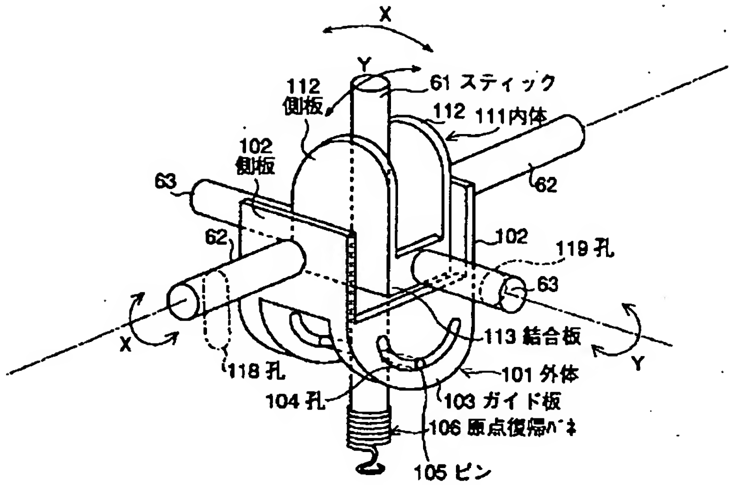

3 パラボナアンテナ
3a
33
CAM
32
カードリーダインタフェース
20B
21B
22B
23B
チューナ
QPSK
エラー訂正
21A
22A
23A
チューナ
QPSK
復調回路
エラー
訂正回路
20A
25A
デマルチプレクサ
24
29
CPU
MC 68340
デコード部 44B
DRAM
25aB
25B
DRAM
25aA
MPEG
ビデオデコーダ
44A
デコード部
DRAM
26a
26
MPEG
オーディオデコーダ
27
NTSC
エンコーダ
PinP
プロセッサ
45
41
RF
モジュレータ
D/A
30
28Y
28C
28V
Y
C
S Video
Composite Video
RF IN
RF OUT
31L
31R
Audio L
Audio R
EEPROM
38
ROM
37
SRAM
36
カレンダタイマ
35
2A
40
39
AV機器制御信号送受信部
スイッチボード
IR受信部
モデム
34
Telphone line
12
VCR6へ
IRD 2

[Drawing 4]

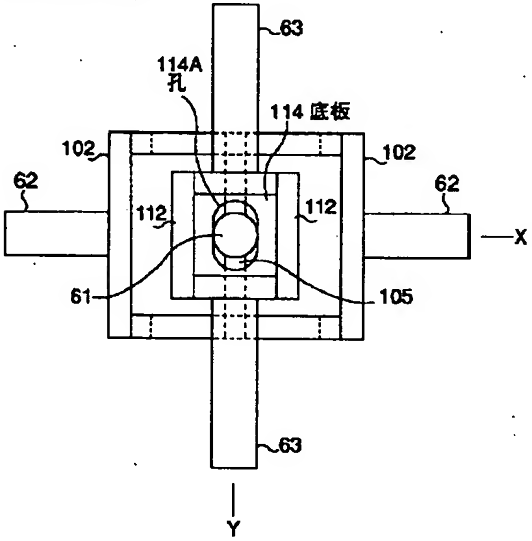

51 IR発信部
5
52 操作子
PRESS ENTER
50
ボタンスイッチ
ESC
MENU
53 メニューボタンスイッチ
54
エスケープ
ボタンスイッチ

リモートコマンダ5

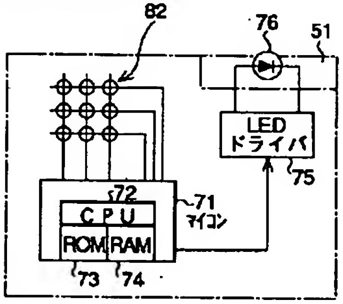
[Drawing 6]


X
Y
61 スティック
112 側板
112
111 内体
102 側板
63
62
62
102
119 孔
63
X
Y
113 結合板
118 孔
101 外体
104 孔
103 ガイド板
106 原点復帰バネ
105 ピン

[Drawing 9]

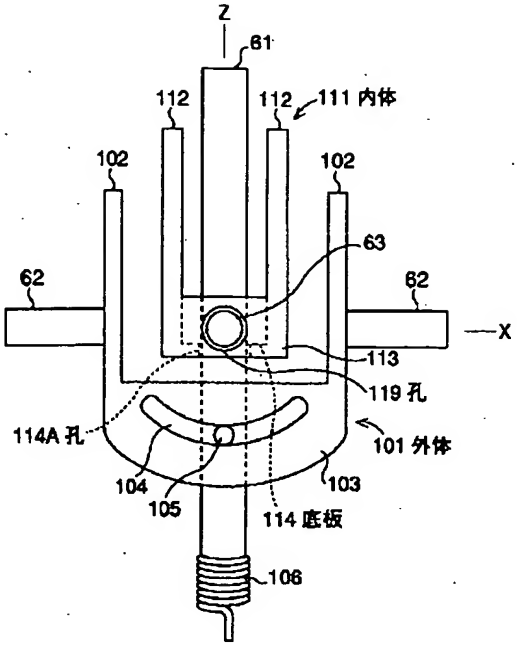

63
114A 孔
114 底板
102
102
62
62
112
112
X
61
105
63
Y

[Drawing 24]

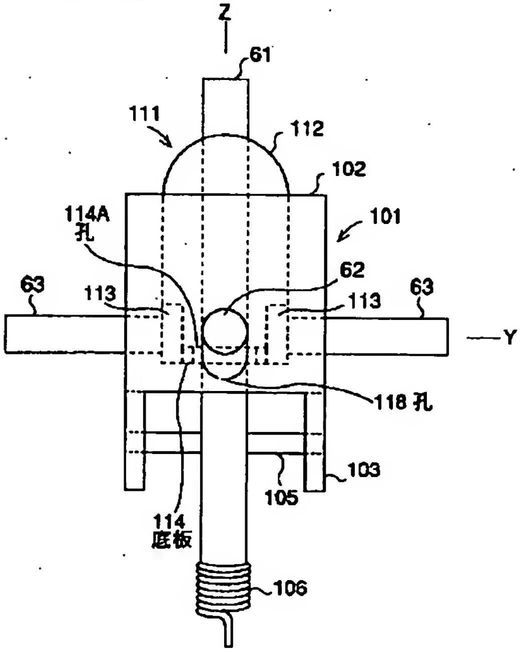

82
76
51
LED ドライバ
75
72
CPU
ROM
RAM
71 マイコン
73
74

リモートコマンダ 5

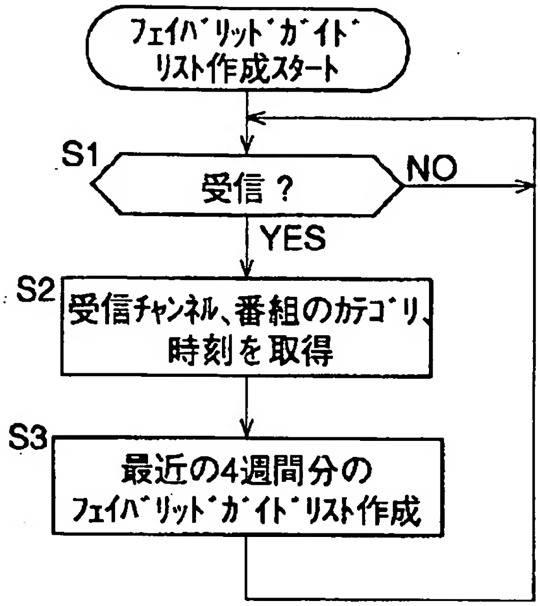
[Drawing 7]


Z
61
112
112
111 内体
102
102
63
62
62
X
113
119 孔
114A 孔
101 外体
104
103
105
114 底板
106

[Drawing 8]


Z
61
111
112
102
101
114A 孔
62
63
113
113
63
Y
118 孔
103
105
114 底板
106

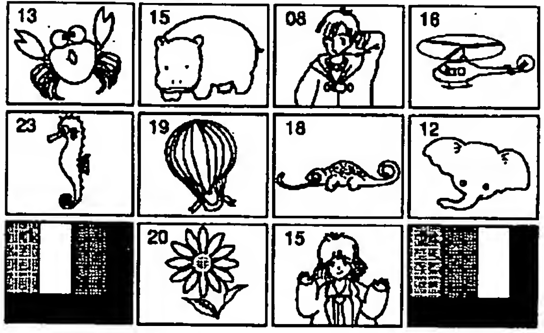
[Drawing 11]


ﾌｪｲﾊﾞﾘｯﾄﾞｶﾞｲﾄﾞ
ﾘｽﾄ作成ｽﾀｰﾄ
S1
受信？
NO
YES
S2
受信ﾁｬﾝﾈﾙ、番組のｶﾃｺﾞﾘ、
時刻を取得
S3
最近の4週間分の
ﾌｪｲﾊﾞﾘｯﾄﾞｶﾞｲﾄﾞﾘｽﾄ作成

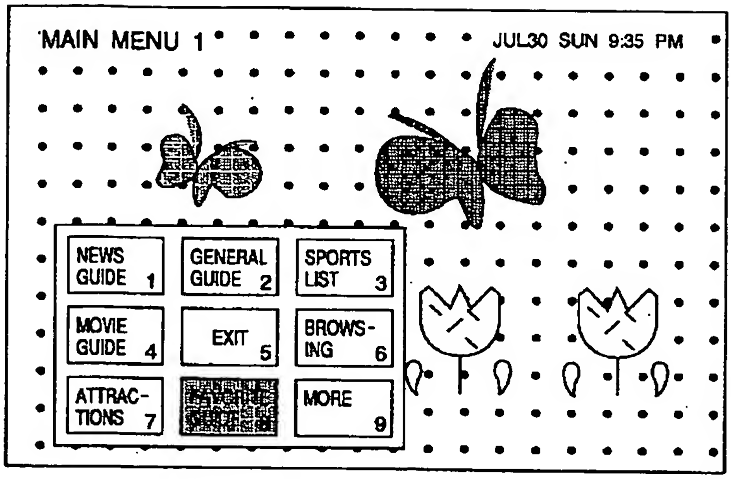
[Drawing 12]

時刻	カテゴリ		C_1	C_2	C_3	C_4	C_5
	名称		NEWS	MOVIE	SPORTS	POLITICS	MUSIC
6:00	チャンネルN	1	35	60	95	4	33
		2	36	93	2	66	13
		3	25	103	133	71	1
		4	6	3	134	75	5
		5	113	7	59	80	6
6:30	チャンネルN	1	35	7	95	66	155
		2	25	103	2	4	13
		3	6	60	59	80	1
		4	113	93	133	71	5
		5	36	3	134	80	33
7:00							

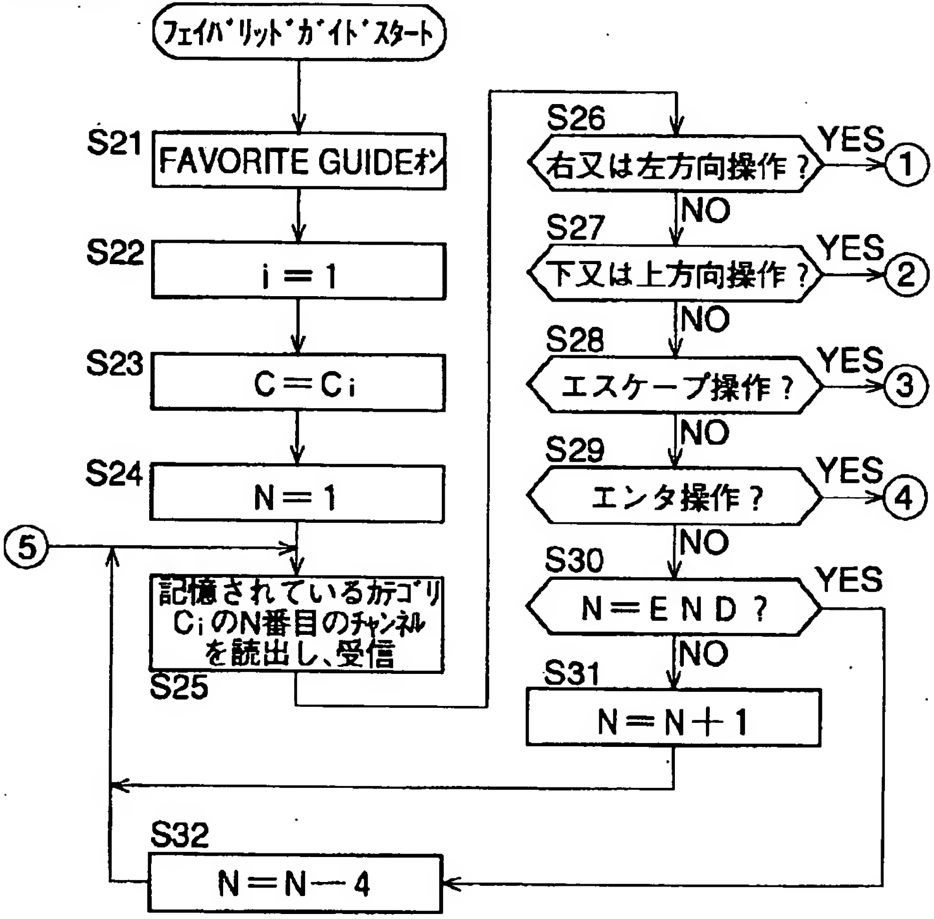
[Drawing 25]


13
15
08
16
23
19
18
12
20
15

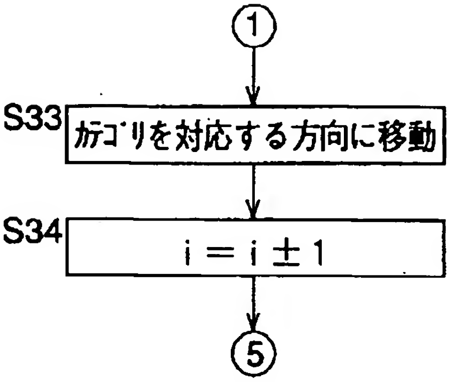
[Drawing 13]

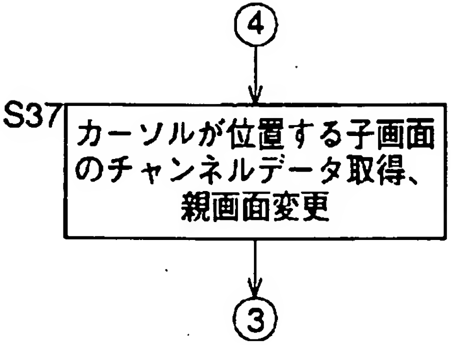

MAIN MENU 1
JUL30 SUN 9:35 PM
NEWS GUIDE 1
GENERAL GUIDE 2
SPORTS LIST 3
MOVIE GUIDE 4
EXIT 5
BROWS-ING 6
ATTRAC-TIONS 7
MORE 9

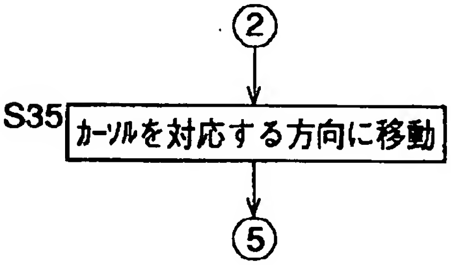
[Drawing 14]

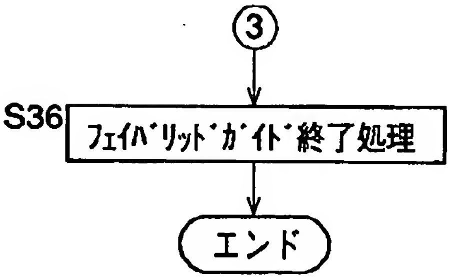

ﾌｪｲﾊﾞﾘｯﾄｶﾞｲﾄﾞｽﾀｰﾄ
S21
FAVORITE GUIDEｵﾝ
S22
i＝1
S23
C＝Ci
S24
N＝1
⑤
記憶されているｶﾃｺﾞﾘ Ci のN番目のﾁｬﾝﾈﾙを読出し、受信
S25
S26
右又は左方向操作？
YES
①
NO
S27
下又は上方向操作？
YES
②
NO
S28
エスケープ操作？
YES
③
NO
S29
エンタ操作？
YES
④
NO
S30
N＝END？
YES
NO
S31
N＝N＋1
S32
N＝N－4

[Drawing 15]

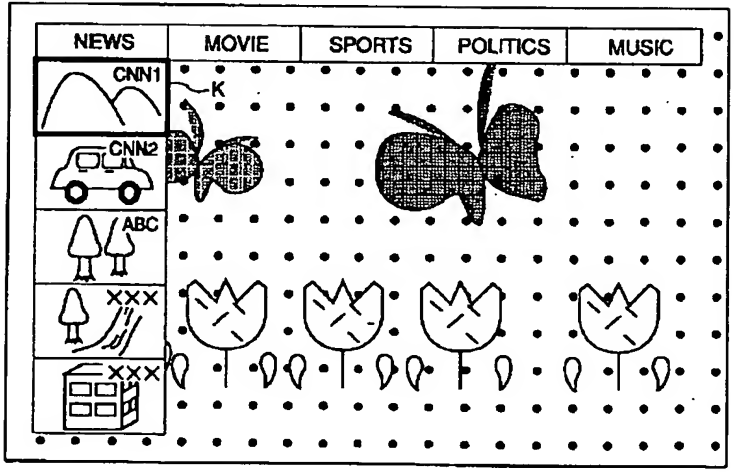

①
S33
ｶﾃｺﾞﾘを対応する方向に移動
S34
i＝i±1
⑤


④
S37
カーソルが位置する子画面のチャンネルデータ取得、親画面変更
③

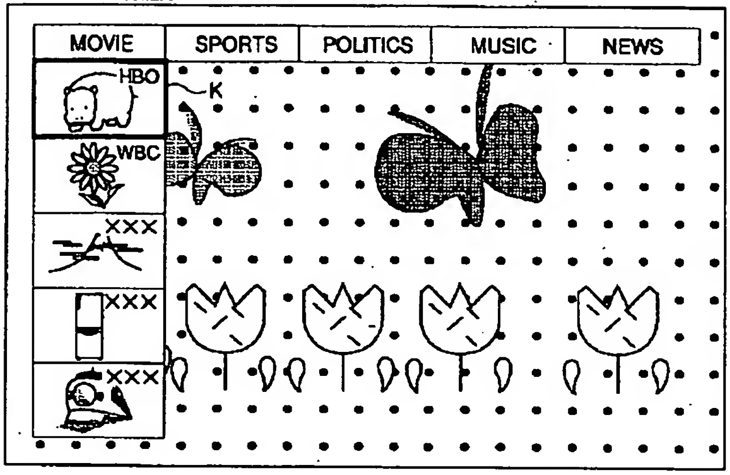

②
S35
ｶｰｿﾙを対応する方向に移動
⑤


③
S36
ﾌｪｲﾊﾞﾘｯﾄｶﾞｲﾄﾞ終了処理
エンド

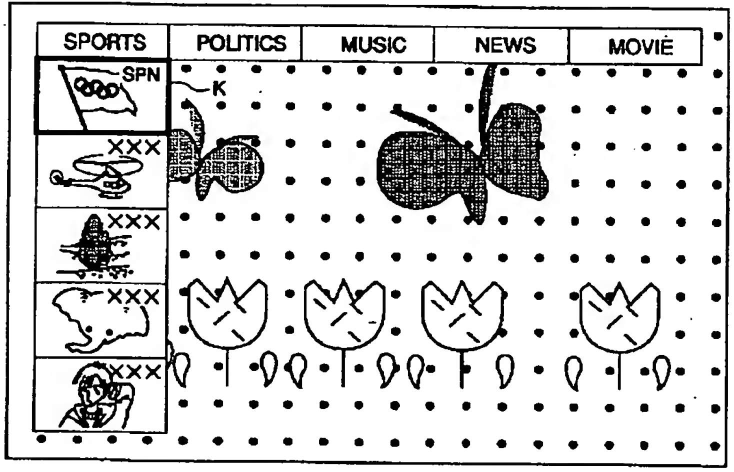
[Drawing 16]


NEWS
MOVIE
SPORTS
POLITICS
MUSIC
CNN1
K
CNN2
ABC
XXX
XXX

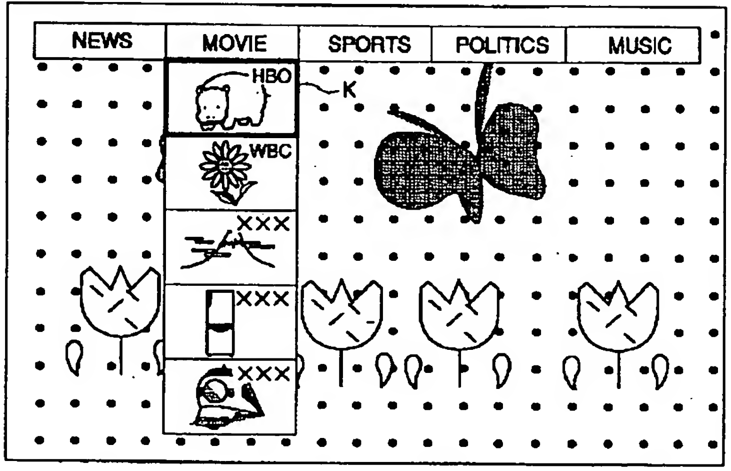
[Drawing 17]


MOVIE
SPORTS
POLITICS
MUSIC
NEWS
HBO
K
WBC
XXX
XXX
XXX

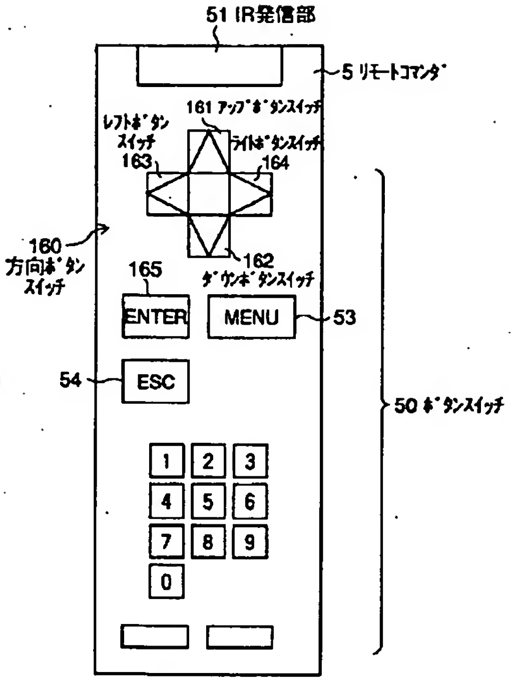
[Drawing 18]


SPORTS
POLITICS
MUSIC
NEWS
MOVIE
SPN
K
XXX
XXX
XXX
XXX

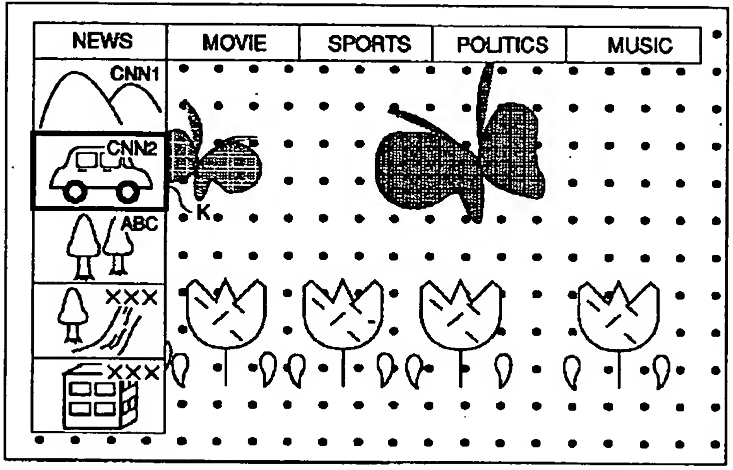
[Drawing 19]


NEWS
MOVIE
SPORTS
POLITICS
MUSIC
HBO
K
WBC
XXX
XXX
XXX

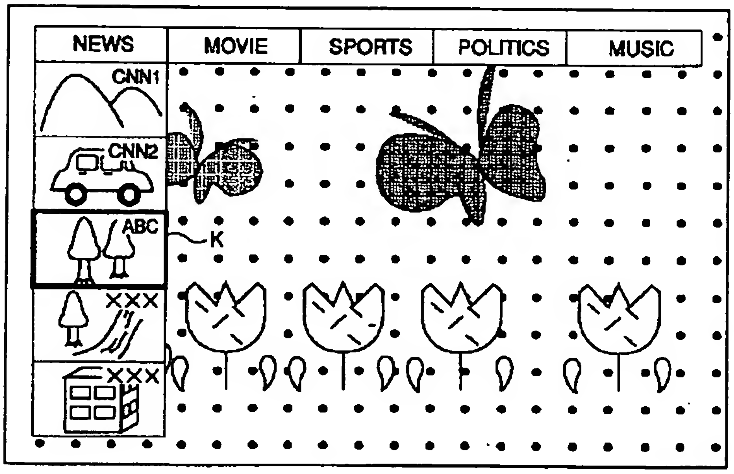
[Drawing 23]


51 IR発信部
5 ﾘﾓｰﾄｺﾏﾝﾀﾞ
161 ｱｯﾌﾟﾎﾞﾀﾝｽｲｯﾁ
ﾚﾌﾄﾎﾞﾀﾝｽｲｯﾁ 163
ﾗｲﾄﾎﾞﾀﾝｽｲｯﾁ 164
160 方向ﾎﾞﾀﾝｽｲｯﾁ
165
162 ﾀﾞｳﾝﾎﾞﾀﾝｽｲｯﾁ
ENTER
MENU
53
54
ESC
50 ﾎﾞﾀﾝｽｲｯﾁ
1
2
3
4
5
6
7
8
9
0

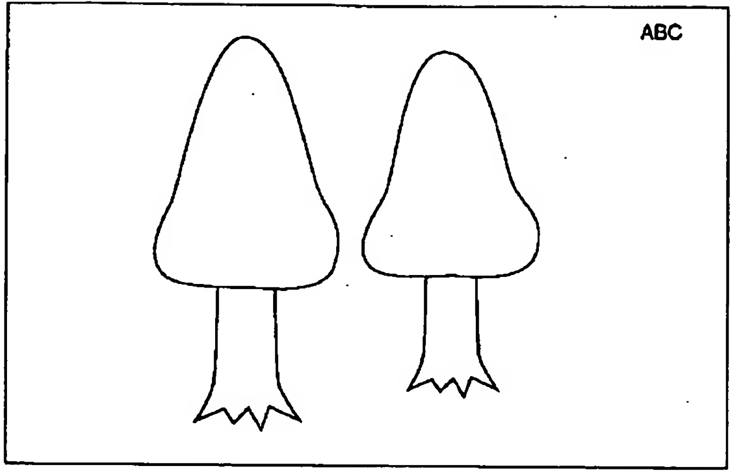
[Drawing 20]


NEWS
MOVIE
SPORTS
POLITICS
MUSIC
CNN1
CNN2
ABC
XXX
XXX
K

[Drawing 21]


NEWS
MOVIE
SPORTS
POLITICS
MUSIC
CNN1
CNN2
ABC
XXX
XXX
K

[Drawing 22]



[Translation done.]

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☐ BLACK BORDERS

☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES

☐ FADED TEXT OR DRAWING

☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING

☐ SKEWED/SLANTED IMAGES

☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS

☐ GRAY SCALE DOCUMENTS

☑ LINES OR MARKS ON ORIGINAL DOCUMENT

☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY

☐ OTHER: ______________________

IMAGES ARE BEST AVAILABLE COPY.
As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.